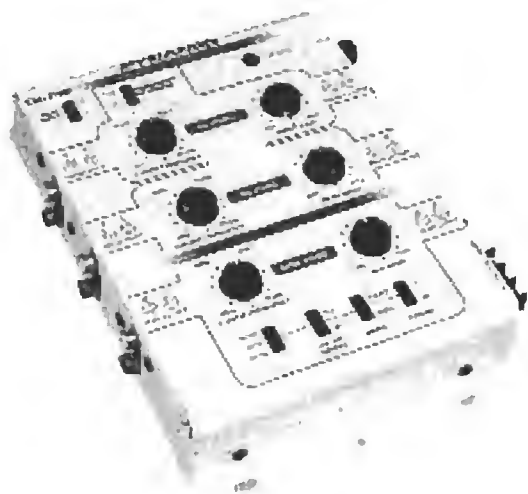


**PYRAMID<sup>®</sup>**  
**Gold Series**  
**OWNER'S**  
**MANUAL**



**MODEL: CR-74G**  
**ELECTRONIC**  
**CROSSOVER NETWORK**

## FEATURES:

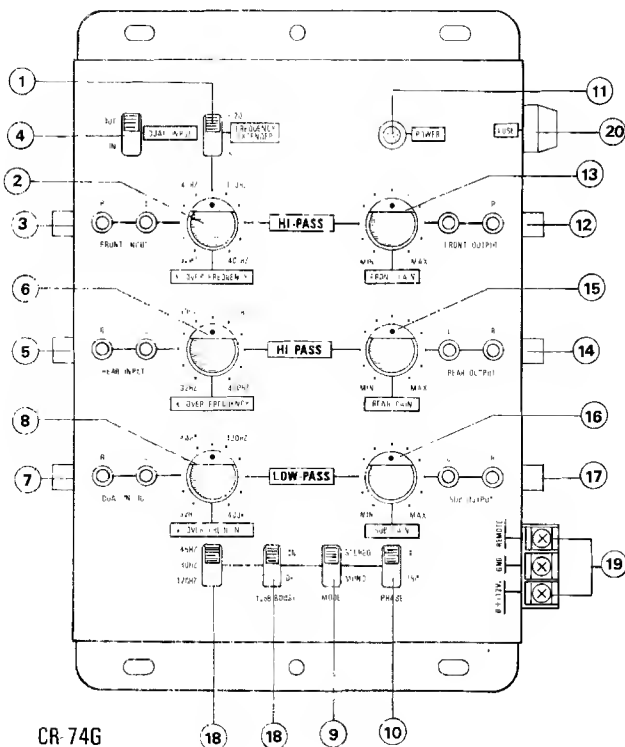
The CR-74G was created to help the car stereo audiophile to install a bi-amp, tri-amp or multi-amp system with extreme ease while still allowing for the most sophisticated settings available in a high end installation.

The CR-74G has two front and one rear pre-amp inputs via RCA jacks with corresponding front and rear RCA output jacks. It also features a constant subwoofer output which operates independently of any fader control.

What makes the CR-74G special is that it features two high pass crossover points that are infinitely adjustable from 32Hz to 400Hz and a low pass crossover for subwoofer. The frequency extender switch extends the crossover frequency of the front output for high frequency speakers thus changing the crossover points to be

adjustable from 640-8,000Hz instead of 32-400Hz. The frequency extender affects the front outputs only. The dual input switch allows radios and equalizers with only one pair of RCA pre-amp jacks to operate both front and rear outputs at the same time. Thus by placing the frequency extender switch and the dual input switch to the on position converts the CR-74G into a three-way crossover system.

The CR-74G also features a 12dB boost at 45, 80 or 120Hz to help create a smoother bass response when the subwoofer is baffled in a cabinet. The phase shifter switch shifts the subwoofer output 180 degrees out of phase to help compensate time loss between the mid/high end frequency drivers and the subwoofer. The stereo/mono switch changes the subwoofer output to either stereo or mono for single subwoofer use.



## FUNCTIONS:

## 1. FREQUENCY EXTENDER

This switch changes crossover points from 32-400Hz to 640-8,000 Hz for high frequency front channel drivers.

## 2. FRONT CHANNEL HIGH PASS CROSSOVER SELECTOR

By turning the selector you can choose from an infinite number of crossover points from 32-400Hz in the standard mode and from 640-8,000Hz when the frequency extender is in the on position.

### 3. FRONT CHANNEL INPUT PORT

Input front signal from sound source into here via RCA cable. If your sound source has only one pair of preamp RCA cables you must plug them into this input channel and push to the on position the dual input switch.

#### 4. DUAL INPUT SWITCH

Putting this switch to the on position allows you to hookup a sound source with just one set of pre-amp RCA cables. It automatically transfers the signal to both the front and rear channels. Do not, under any circumstances, input into the rear channel when the dual input switch is in the on position.

## 5. REAR CHANNEL INPUT PORT

Rear faded input signal from sound source into here via RCA cable. When using both the front channel input port and the rear channel input port simultaneously the Dual Input Switch should be in off position.

## 6. REAR CHANNEL HIGH PASS CROSSOVER SELECTOR

By turning the selector you can choose from an infinite number of crossover points from 32-400Hz. **2**

## **7. DUAL IN/OUT PORT**

You can use this connection if you have a third pre-amp audio source for the subwoofer or connect two or more CR-74G modules to create a system with unlimited number of amplifiers.

## **8. SUBWOOFER LOW PASS CROSSOVER SELECTOR**

By turning the selector you can choose from an infinite number of crossover points from 32-400HZ.

## **9. STEREO/MONO SELECTOR**

By pushing this switch to the on position the subwoofer output changes from stereo to mono, thus facilitating single subwoofer installations.

## **10. PHASE SHIFTER SELECTER**

Allows you to change the phase of your subwoofers from 0 degrees to 180 degrees to help compensate for timing differences between drivers.

## **11. LED POWER INDICATOR**

This indicator lights up when the unit is properly powered/ground and the remote power is turned on to it.

## **12. FRONT CHANNEL OUTPUT PORT**

Connect the RCA cable to the front channel amplifier input.

## **13. FRONT GAIN CONTROL**

By turning this control clockwise you increase the front channel level.

## **14. REAR CHANNEL OUTPUT PORT**

Connect the RCA cable to the rear channel amplifier input.

## **15. REAR GAIN CONTROL**

By turning this control clockwise you increase rear channel level.

## **16. SUBWOOFER GAIN CONTROL**

By turning this control clockwise you increase subwoofer channel level.

## **17. SUBWOOFER CHANNEL OUTPUT PORT**

Connect the RCA cable to the subwoofer channel amplifier input.

## **18. WOOFER/ENCLOSURE EQUALIZATION**

**(+12dB Boost at 45/80/120Hz)**

By pushing this switch you activate a single octave 12dB boost at either 45, 80 or 120Hz, depending on the position of the Frequency Selector Switch and maintain smooth bass response.

## **19. POWER CONNECTION PORT (B+ /B- /REMOTE)**

### **B+ WIRING**

Connect a red wire of at least 21 gauge to the B+ terminal screw and wire to the car battery or other power source.

### **B- WIRING**

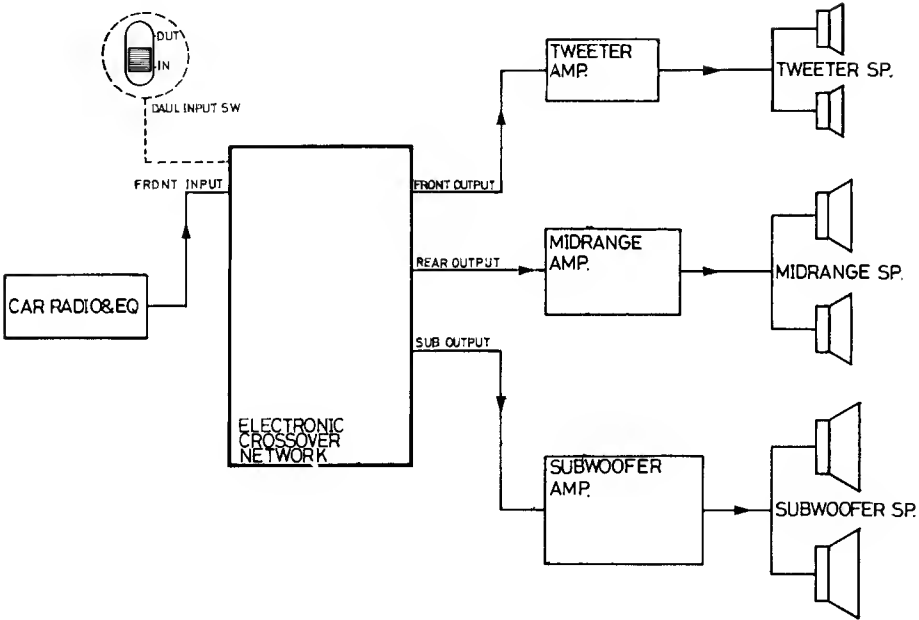
Connect a black wire of at least 12 gauge to the B- terminal screw and wire to car chassis for round connection.

### **REMOTE WIRING**

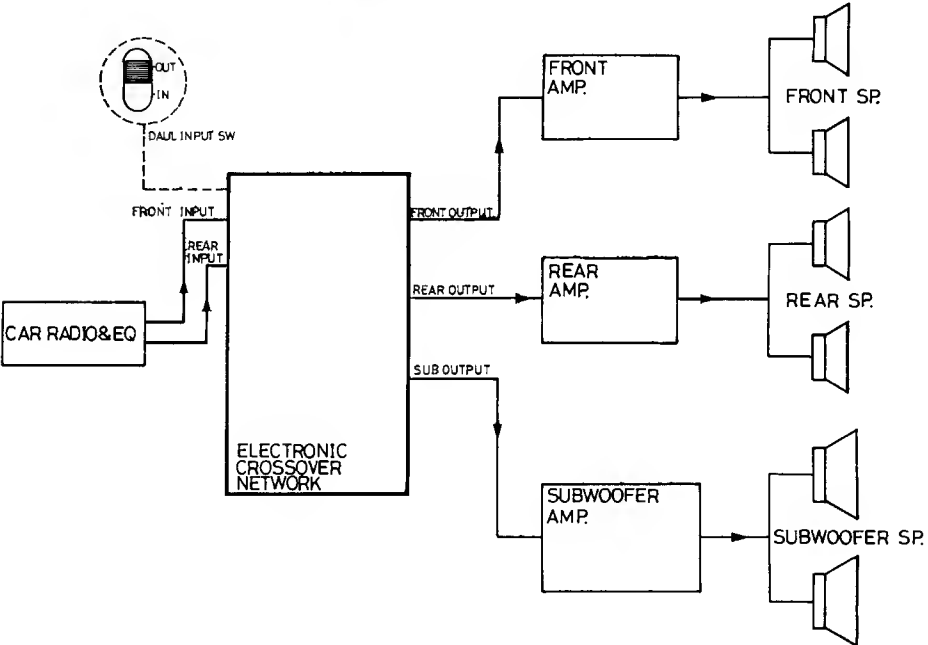
Connect an orange wire to remote activating (12VDC+) wire of car stereo.

# ELECTRONIC CONNECTIONS:

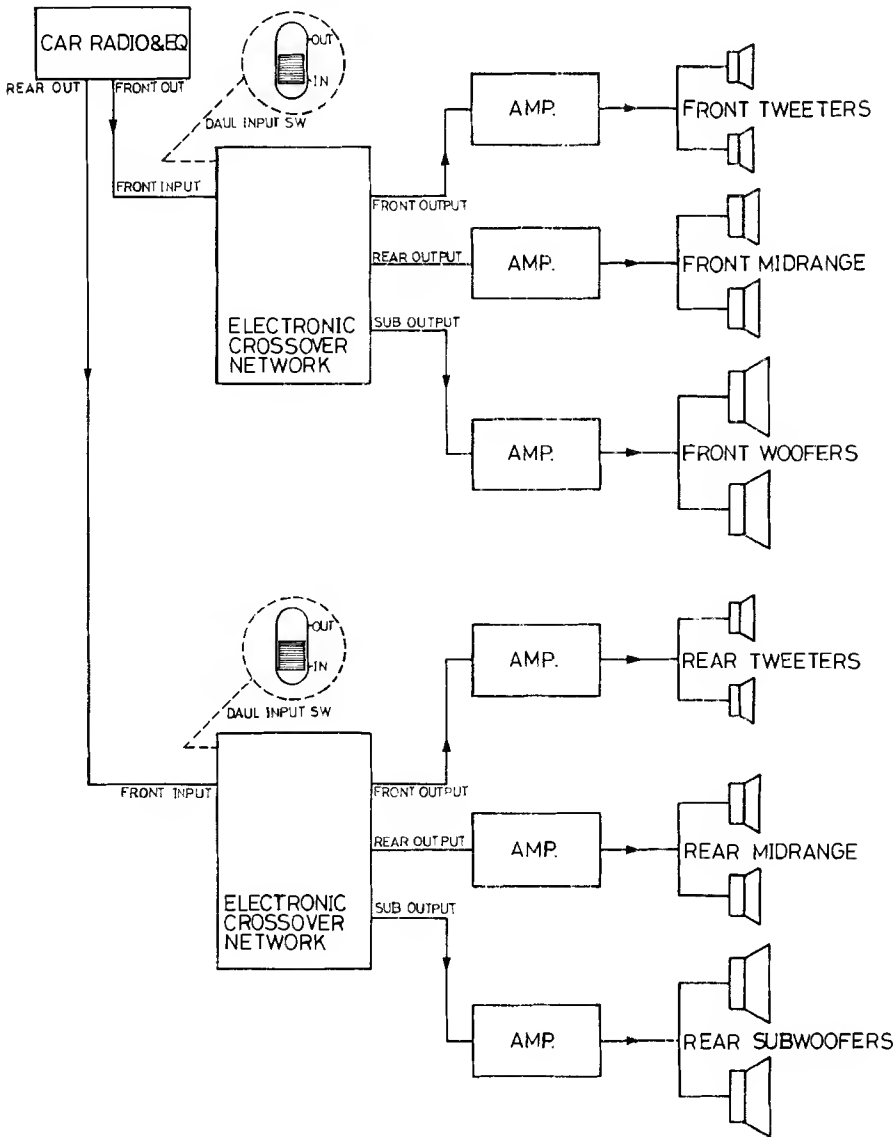
## A. 2-CHANNEL STEREO /THREE-AMPLIFIER SYSTEM



## B. 4-CHANNEL STEREO FRONT /REAR /BI-AMPLIFIED SYSTEM

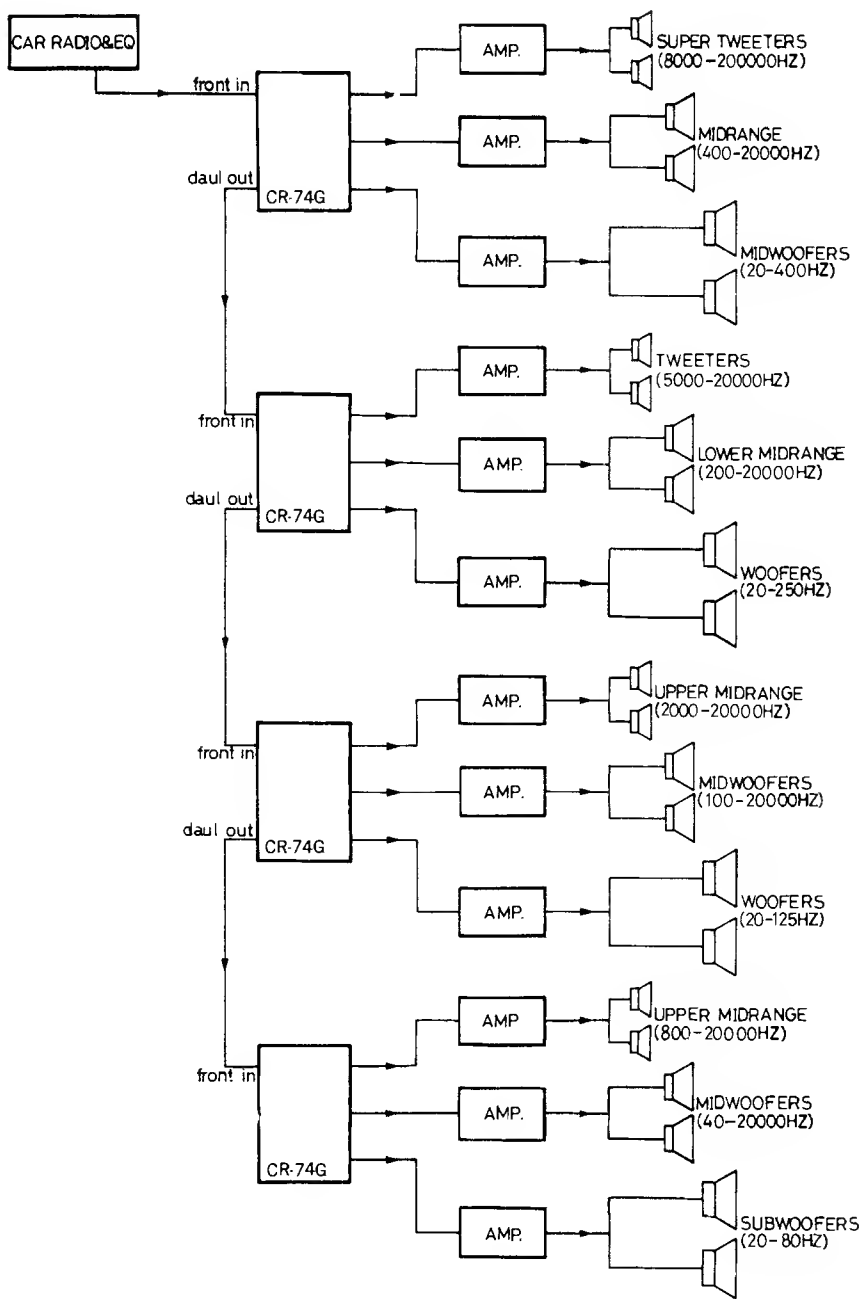


C. 4-CHANNEL STEREO FRONT/REAR/THREE AMPLIFIER SYSTEM

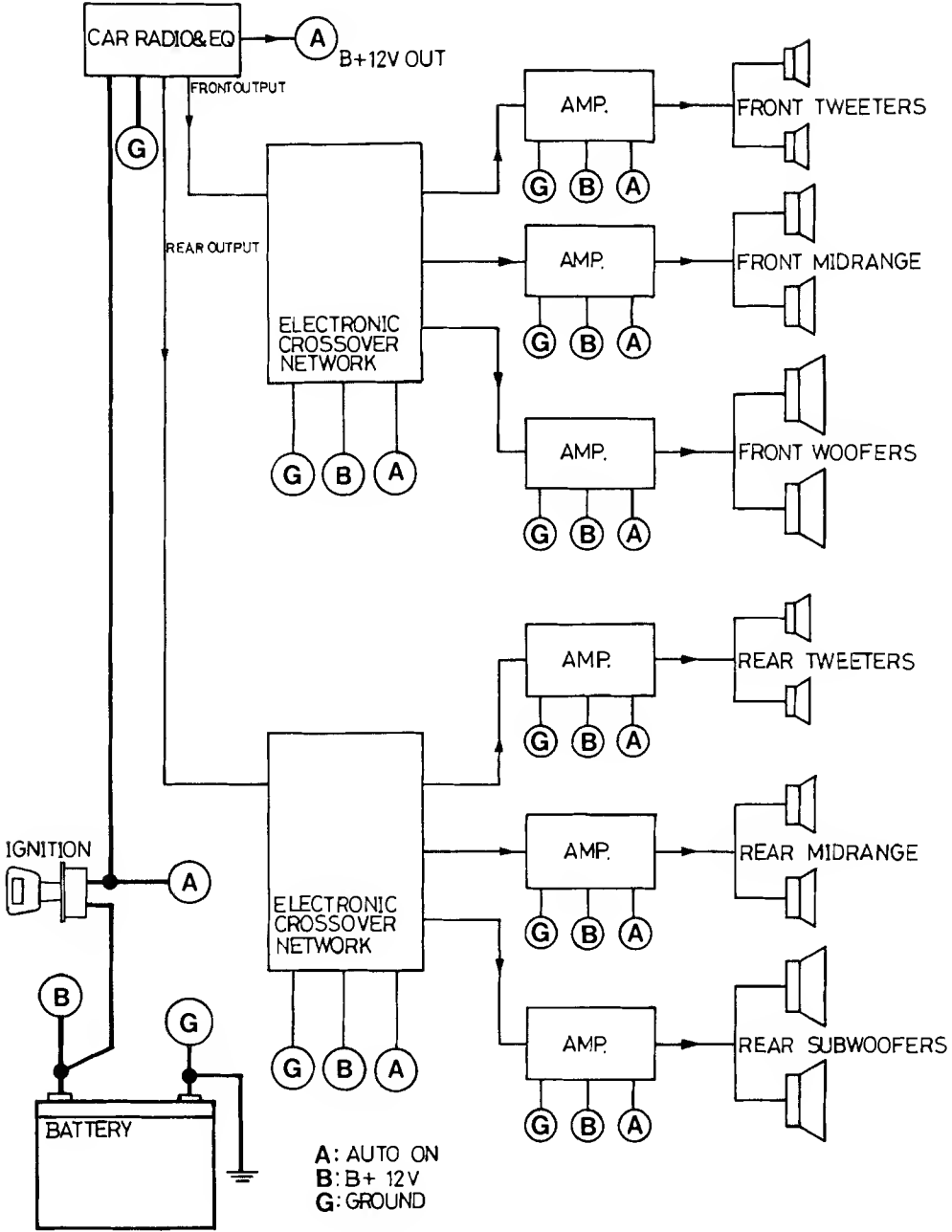


D. 2-CHANNEL MULTIPLE AMPLIFIER INSTALLATION

**NOTE:** Each set of three amplifiers can be converted to single PB-900G's in order to ease installation. 4-channel amps can also be substituted for two -channel amps.



E. ELECTRICAL WIRING DIRECTIONS





## ADJUSTMENTS:

### NOTE:

1. Please use cassette tape or compact disc that has good dynamic range for setting output level and crossover frequencies.
2. Please locate FM signal at the strongest station for radio reception.
3. Do not mount the CR-74G until the following 6 steps have been completed.
4. Do not overdrive the audio system.
4. Turn the radio volume control to a desired listening level for each program source & mark down the figure for easily relocating if the setting accidentally changes.
5. If the front/rear volume levels are not balanced after setting the levels, turn the fader to the center position and adjust the front amplifier gain control to match with rear amplifier system.

### STEP 1

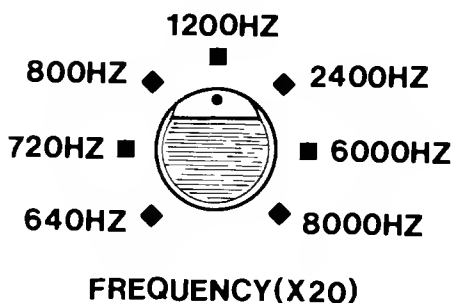
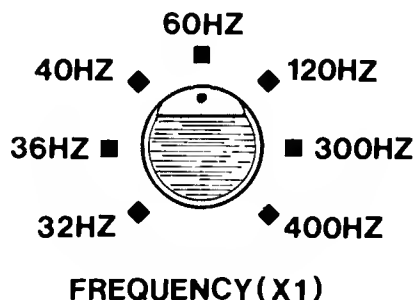
1. Adjust the input gain control of each amplifier to half of maximum.
2. Adjust each of the output gain controls and crossover selector point of the CR-74G at the following positions:  
Front gain: at 10 o'clock  
Rear gain: at 10 o'clock  
Subwoofer gain: at 12 o'clock  
Front Hi-pass: at 160Hz  
Rear Hi-pass: at 160Hz  
Subwoofer low pass: at 160Hz
3. Activate the radio power on and turn up the volume slowly, if any of the following symptoms are found please turn off the system and refer to the trouble shooting chart for remedy.  
A. Obvious distortion  
B. Not working  
C. No bass response

### STEP 2 - OUTPUT LEVEL

1. Set the tone, balance and fader control of radio at center position.
2. Set the volume control at approximately 2 o'clock position.
3. Adjust the front, rear and subwoofer channel output level with cassette tape or compact disc by turning each of the gain controls of CR-74G until the signal begins to distort. If radio output levels differ considerably from cassette tape / CD output levels, locate a position suitable for both sources.

### STEP 3 - Crossover FREQUENCY

In addition to the crossover frequencies printed on the CR-74G, the others are shown as follows:



## **TO SET SUBWOOFER CROSSOVER FOLLOW THESE INSTRUCTIONS**

1. Same as Step 2 - 1.
2. Same as Step 2 - 2.
3. Adjust the subwoofer crossover frequency downward from the pre-setting of 160Hz to 100Hz or below. If the bass is 'boomy' or soft, adjust the crossover frequency even lower. It is advisable to check the frequency response of your woofer, so you set the crossover to match, though it is more important to have good sound than frequency match. If the bass is tight and deep sounding, but the volume level is low, increase the subwoofer gain control to match the mid-range volume.
4. Front channel crossover frequency —
  - A. Adjust the fader of radio/tape/CD to increase volume level of the front outputs.
  - B. Adjust the front channel crossover frequency downward or upward slowly from the pre-setting of 160Hz and listen to the preferred performance.
5. Rear channel crossover frequency —
  - A. Adjust the fader of radio/tape/CD to increase volume level of the rear outputs.
  - B. Adjust the rear channel crossover frequency downward or upward slowly from pre-setting of 160Hz & listen to preferred performance.
6. Proceed with the road test to check for sound quality and re-adjust the subwoofer output level relative to the mid-range again according to noise inside the moving car if necessary.
7. Mark down the best sounding output level and crossover frequency setting for easy relocating if the setting accidentally changes.

## **STEP 4 - SUBWOOFER PHASE**

The relative distance of the subwoofer and the mid-range/tweeter inside a car may cause a time delay between the two systems. The car audio system will then sound out of phase, no bass or the bass seems to lag behind the highs. Set the phase switch selector from one position to the other and listen to the sound performance, leave the switch in the position where you have the most bass output from the subwoofer.

## **STEP 5 - SUBWOOFER STEREO/ MONO MODE**

1. Set the mode switch to the mono position for a single subwoofer system.
2. Set the mode switch to either the mono or stereo position for more than two subwoofer systems.
3. Please note: the stereo mode will give you better stereo separation, the mono mode will result in higher bass output level but without stereo separation.

## TROUBLE SHOOTING:

SYMPTOM	REMEDY
1. Not working	Check the battery cables for a good connection. Check all fuses. Check all power wire connections, if the system is receiving +12V.
2. LED power on indicator not going on.	Same as symptom 1 remedy.
3. A whining sound can be heard through the speakers at low volume level with running engine.	Check the red power wire with good connection directly to the battery and ground point must make good contact with chassis ground. The radio and the CR-74G must be grounded at the same point to avoid ground loops.
4. A motor boating type of sound when system is at reasonably Hi-level.	Same as symptom 2 remedy. Or, Output levels not set correctly.
5. Sound distortion at low volume level.	Output levels not set correctly.
6. A whining noise that increases and decrease as the volume is varying at a normal listening level and running engine.	Install a 10A in-line filter on CR-74G red power wire. Check the alternator diodes or the voltage regulator.

**NOTE:** It is very important to use high quality shielded RCA patch cords for all audio installations. Use of cheap unshielded RCA patch cords can be the source of many types of interference and noise. Never run power wires and audio signal wires through the same route. Power and ground wires should run through one side of the vehicle and audio cables on the other. By following the above 2 points you can solve many of your noise problems.

## SPECIFICATIONS:

<b>Input Current</b>	0.5 amp max
<b>Power Supply</b>	10-16 volts DC negative ground
<b>S/N Ratio</b>	► 98dB
<b>Distortion</b>	0.015% THD at 1KHz 0.015% I.M. at 1KHz
<b>Crossover Frequencies</b>	Continuously variable from 32Hz to 400Hz for front, rear and subwoofer output
<b>Frequency Extender, x 20</b>	Continuously variable from 640Hz to 8,000Hz high pass (for front channel output only)
<b>Frequency Response</b>	20Hz — 30KHz±3dB
<b>Subwoofer Boost</b>	Single Boost 12dB at 45/80/120Hz
<b>Input Impedance</b>	► 10K ohms
<b>Output Impedance</b>	◄ 1K ohms
<b>Crossover Slope Rate</b>	12dB per octave, 2nd order butterworth
<b>Output Voltage Level</b>	6 volts max
<b>Output Gain</b>	1:2 for front, rear and subwoofer outputs
<b>Dimensions</b>	142x214x42 mm W.D.H.
<b>FUSE SPECIFICATION</b>	1A, DO NOT OVERLOAD.

